



# Using Analytics and Technology to Improve the ED Patient Experience

## THE URGENCY TO REDUCE EMERGENCY DEPARTMENT WAIT TIMES

Organizations use Consumer Assessment of Healthcare Providers and Systems (CAHPS®) survey scores to evaluate the patient experience and identify areas for improvement. Patients admitted through the Emergency Department (ED) receive surveys that include questions about their experience during the ED visit.<sup>1</sup> Longer wait times negatively impact patient experience and perceptions about the effectiveness of provider and nurse communication, and the overall treatment provided by the healthcare team.<sup>2</sup> Substantial evidence also indicates a correlation between a patient's CAHPS ranking of good communication with the provider and:

- Adherence to medical advice.
- Better clinical outcomes.
- Appropriate utilization of healthcare services.<sup>3</sup>

Mission Health strives to provide world-class care to people and their families when they need it most. Mission's Aim is to get every person to the desired outcome, first without harm, also without waste, and always with an exceptional experience for each person, family, and team member. With that mission in mind, Mission leadership evaluated patient experience scores in its ED.

## DATA-DRIVEN SYSTEMS APPROACH TO IMPROVE THE ED PATIENT EXPERIENCE

The patient experience scores at Mission were significantly lower than desired. Both the physical environment of care and extended length of stay (LOS) in the ED were negatively impacting these scores.

Mission invested in a data-driven systems approach to improve care in the ED. Aided by the Health Catalyst® Analytics Platform, including the Late-Binding™ Data Warehouse and broad suite of analytics applications, Mission identified several opportunities for improvement, including the left without being seen rate, time from arrival to being seen by a qualified medical provider, and LOS.

Mission leaders knew they needed to make changes that would positively impact the patient experience.

## KEY CHANGES IN TECHNOLOGY AND HUMAN RESOURCES

To positively impact the patient experience, Mission implemented a faster registration process, which minimizes questions asked upon patient arrival, expediting patient contact with clinical staff.

Mission focuses on managing expectations, informing patients of anticipated delays in care that may occur when the ED is experiencing surges in patient volume. Mission implemented a web-based application that allows waiting patients to be notified when it is time to be seen by receiving a text message to their cell phone.

“We focused on setting expectations to help make the emergency care visit more pleasurable.”

Rick Lee, MSN, RN, CEN, NE-BC Executive Director, Emergency Services

After the patient is triaged, the registered nurse asks the patient if they would like to receive a text message when it is time to be seen. Use of text messaging ensures that the patient receives the message, and improves patient privacy, as there is no need to announce the patient's name in the waiting area where other visitors are waiting.

To further improve patient privacy, Mission remodeled the patient waiting room, improving the physical layout to better accommodate patient volumes, and creating a private location for patient registration, reducing the likelihood that another patient or visitor will overhear the patient sharing personal information.

Mission developed a surge protocol to rally system support. As surges in patient volume occurred, an alert was sent to leaders of the interdisciplinary team, who responded with appropriate resources to ensure continued patient throughput. The notification was also sent to pre-hospital staff, allowing them to inform patients of anticipated wait times prior to arrival.

Mission also redesigned the discharge process. Previously, it had a single discharge location and patients awaiting discharge were moved to this location. Mission brought the discharge activities back to the patient bedside, eliminating unnecessary movement and inadvertent delays.

The analytics application provided insight on performance, supporting Mission in connecting the impact of interventions to improvement in the targeted outcome metrics, thus helping to identify what interventions were driving improvement.

## RESULTS

In a little more than one year, Mission's data-driven, systems approach has resulted in impressive improvements:

- The Mission ED achieved its highest patient experience scores with a threefold improvement in patient ranking of both:
  - Overall quality of care.
  - Provider communication.
- 29 percent relative reduction in time from discharge order to patient discharge.

## WHAT'S NEXT

Mission plans to continue using analytics and a data-driven, systems approach to improvement to ensure it can provide world-class emergency care, while also providing an exceptional experience for patients and their families. 🌟

## REFERENCES

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2. Bleustein, C., Rothschild, D. B., Valen, A., Valatis, E., Schweitzer, L., & Jones, R. (2014). Wait times, patient satisfaction scores, and the perception of care. *The American Journal of Managed Care*, 20(5):393-400. Retrieved from <https://www.ncbi.nlm.nih.gov/pubmed/25181568>
3. Agency for Healthcare Research and Quality. (2017). *What is patient experience?* Retrieved from <https://www.ahrq.gov/cahps/about-cahps/patient-experience/index.html>

## ABOUT HEALTH CATALYST

Health Catalyst is a next-generation data, analytics, and decision support company committed to being a catalyst for massive, sustained improvements in healthcare outcomes. We are the leaders in a new era of advanced predictive analytics for [population health](#) and [value-based care](#), with a suite of machine learning-driven solutions, decades of outcomes-improvement expertise, and an unparalleled ability to integrate data from across the healthcare ecosystem. Our proven data warehousing and analytics platform helps improve quality, add efficiency and lower costs in support of more than 85 million patients and growing, ranging from the largest US health system to forward-thinking physician practices. Our technology and professional services can help you keep patients engaged and healthy in their homes and workplaces, and we can help you optimize care delivery to those patients when it becomes necessary. We are grateful to be recognized by Fortune, Gallup, Glassdoor, Modern Healthcare and a host of others as a Best Place to Work in technology and healthcare.

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